Marketing of Agricultural Inputs/Implements and Profiles of Farmers in Kenya

Project Preparations

Sørensen, Olav Jull

Publication date:
1986

Document Version
Publisher's PDF, also known as Version of record

AALBORG UNIVERSITY
DEVELOPMENT RESEARCH SERIES
WORKING PAPERS

AALBORG UNIVERSITETSCENTER
SERIE OM UDVIKLINGSFORSKNING
ARBEJDSPAPIRER

MARKETING OF AGRICULTURAL INPUTS/IMPLEMENTS AND PROFILES OF FARMERS IN KENYA: Project Preparations

by
Olav Jull Sørensen

NO. 18 1986

DEVELOPMENT RESEARCH GROUP
AALBORG UNIVERSITY
FIBIGERSTRAEDE 2
9220 AALBORG EAST
DENMARK

GRUPPEN FOR
UDVIKLINGSFORSKNING
AALBORG UNIVERSITETSCENTER
FIBIGERSTRÆDE 2
9220 AALBORG Ø

CONTENT side

PART A: MARKETING OF AGRICULTURAL INPUTS/IMPLEMENTS

1. THE MARKETING SYSTEM IN AGRICULTURAL DEVELOPMENT

Allthough agricultural development has been emphasized to a larger extent in the last two decades in theories of development and in actual development strategies in various developing countries, results in terms of an increase in agricultural production and productivity have often lacked behind visions and plans.

Many reasons for this lack of agricultural development have been given, ranging from exploitation by the world market capitalists over domestic exploitation by a state class to lack of economic infrastructure and marketing facilities in general, the need for land reforms, wrong price policies, the unvillingness on part of the farmers to give up their economic and political independence, and tradition and laziness of the farmers, making it difficult to 'modernize' agriculture.

Focus in this research project is on the markting system linking the agricultural sector with the wider economy, and attention is especially given to the marketing and distribution of agricultural inputs and implements.

A marketing system consists of a set of distribution channels. The marketing system linking the agricultural sector with the wider economy consists of three main channels, namely 1. the channel for agricultural produce, 2. the channel for consumer goods and services, and 3. the channel for agricultural inputs, implements and services. A precondition for agricultural developmnet is that the three channels are developed simoultaneously and in a harmonious way. (See figure 1).

The farmers are in the nexus of the three channels, and from their point of view the three channels can be described as the income channel (=the channel for agricultural produce), the cost-channel (=the channel for inputs, implements and

services), and the spending channel (=the consumer goods channel).

Each of the three principal channels can be broken down into sub-channels. The channel for inputs, implements and services has three sub-channels (see figure 1), namely a sub-channel for:

1. commodities (seeds, chemicals, tools etc.),
2. credit and loans,
3. know-how and training (extension services etc.).

The three sub-channels are often organized or institutionalized separately. Extension services are mostly handled by the Ministry of Agriculture; The distribution of inputs and implements by state trading organizations as well as co-operatives and private undertakings, and credit and loans by Agricultural Development Banks and Co-operative Banks.

Needless to say that the three sub-channels must be coordinated in order to develop agriculture and that this coordination task is the more difficult the more different the institutional arrangement is.

The primary focus of the research project is on the sub-channel for commodities, but as the success of this sub-channel is closely linked to the working of the two other sub-channels, the project will have to study these channels in some details.[1)]

In the following some key issues related to the channel for inputs and implements will be presented.

---

1) A project on 'Small Farmer Credit Schemes' is undertaken by Phil Raikes, Centre for Development Research Copenhagen and financed by Danida's Research Fund. The two projects will cooperate and benefit from each other.

FIGURE 1: The Agricultural Marketing System: Three Principal Channels.

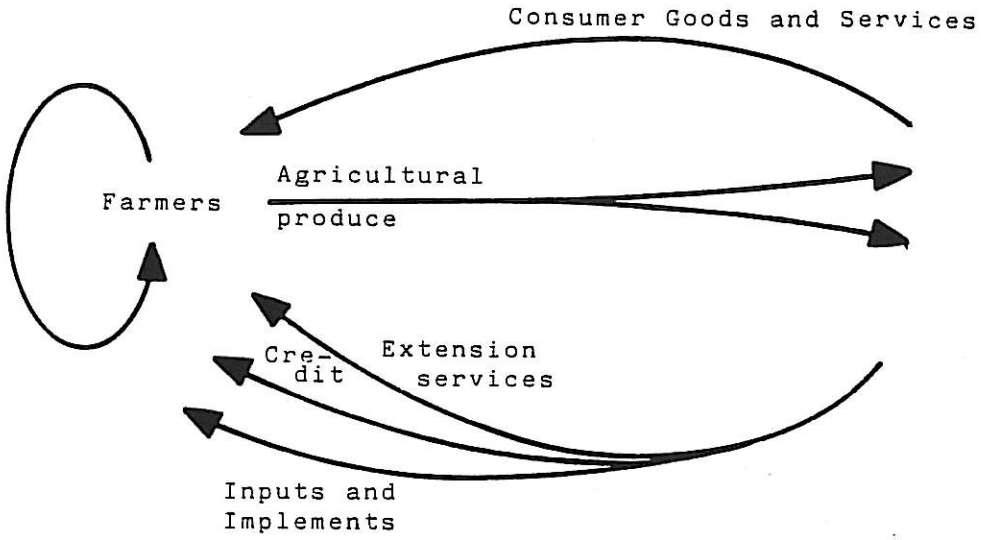
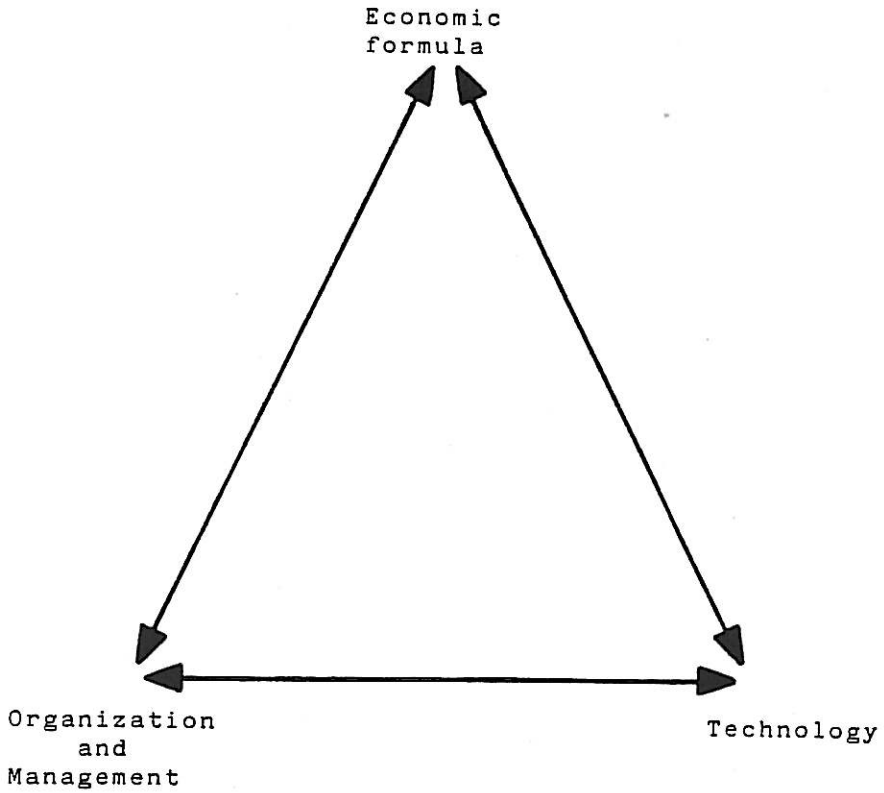


FIGURE 2: Principal Model of Agricultural Production.



2. THE CHANNEL FOR INPUTS AND IMPLEMENTS IS CRUCIAL TO AGRICULTURAL DEVELOPMENT

To increase agricultural production and productivity beyond what it is today, it is important to develop the farming technology and know-how. Irrespective of whether this is done on the basis of a transfer of Western agricultural technology and know-how or on indigenous development, the channel for agricultural inputs and implements is essential to assure that the necessary supplies reach the rural areas, and it is also important as a channel to diffuse and induce change.

Agricultural production like any other type of production can be seen as an interplay between organizational, economic and technological factors (see figure 2). Actual production takes place through the interplay of 'organization' and 'technology'. The choice of production (quantity, quality, etc.) is done by means of socio-economic formulas, e.g. an investment calculation.

An increase in production and productivity can be initiated by altering for example the technology component, remembering, however, that the effects of the change depend on how the organizational as well as the economic factors are affected.

As a change in technology normally is accompanied by a change in division of labour in the sense that new inputs and implements are produced outside the agricultural sector, a need for establishing a new marketing and distribution channel arises.

Experience has shown, however, that this is not an easy task - not as easy as developing the channel for consumer goods and agricultural produce, primarily because it requires a lot of agricultural know-how and capital, and because change of technology is a critical decision for the farmers, who thereby give up experienced and ecologically based farming practices. The project will focus on these difficulties, and on how they can be solved.

3. THE CHANNEL IS CRITICAL FOR FARMERS

The integration of farmers into the wider economy can take place through all three principal channels, but they are not equally critical to the farmers - critical in the sense of more permanently linking the farmers to the wider economy through the marketing system, and thereby making the farmers dependent upon the system.

To some extent it is possible for farmers to enter the channels for agricultural produce and consumer goods without comprehensive changes in their technological basis. In doing so the farmers facilitate their reproduction without changing the methods of production to a large extent.

This is not the case when farmers enter the input/implements channel. This channel aims at changing the technological basis of the farmers, whereby they become more integrated in the economy and more dependent on the smooth functioning of the marketing system.

In other words, the farmers become part of a wider division of labour by entering the channel for implements and inputs, and this makes them more sensitive to changes in other parts of the economy - parts, which are outside their immediate control.

A precondition for changing the technological basis is therefore that the marketing system is able to supply the farmers with the relevant inputs and implements on a continuous basis, and to this end it is essential to develop a 'profile of farmers' upon which the organization of the channel for implements and inputs can be based.

The project will develop such a profile of the Kenyan farmers, revealing whether they are traditionalistic, entrepreneurial, have a market exit option etc.[1] This profile will

---

1) A preliminary profile of the Kenyan farmers is presented in part B.

next be used to stipulate the requirement to the marketing system in casu the channel for inputs and implements.

4. APPROACHES TO THE UNDERSTANDING OF THE MARKETING OF INPUTS AND IMPLEMENTS

How can we approach the issue of marketing and distribution of inputs and implements. As it is a complicated issue, we should not look for just one approach, but use more in an attempt to develop a more comprehensive framework for studying 1. the relationship between the farming community and the marketing system for inputs/implements; and 2. the organization of the marketing system.

To study the relationship between the farmers and the marketing system we need profiles of the farmers. A preliminary one of the Kenyan farmers is shown in part B. The profile must emphasize the dynamics, i.e. the social forces at work in the farming community (the village), in the rural areas in general, and between farmers and the wider economy. Static description or stereotypes (like farmers are bounded by tradition) are of no use.

The profiles will vary according to the political and economic set-up of the country. The profile of Kenyan farmers thus departs from that of Tanzanian farmers even if they are close neighbours.[1)] Other factors such as ecological conditions are also making profiles different in different countries.

It is important that the profiles are correct, because they form input to the understanding of the marketing system and how to organize it.

---

1) Sørensen, O. Jull: Profiles of Peasants and the Implications for Marketing System's Development. The Case of Tanzania. Working Paper Series no. 14., AUC 1984.

The relationship between the farmers and the marketing system as well as the actual structure of the marketing system is proposed to be studied using four more or less complementary approaches:

1. The Adoption-Diffusion Approach,
2. The Product and Technology Development Approach,
3. The Industrial Organization Approach, and
4. The Market-Hierarchy Approach.

Of these four most researchers have used either 1. or 3. By adding 2. and 4. and by seeing the approaches as complementary it is believed that we can get a better understanding of the organization and working of the marketing system for inputs and implements.

To the four is added a fifth - the political-economic approach. This is done to get an understanding of the overall forces at work in society, and just as the profiles of farmers and the farming community are inputs to the study of the marketing system so is the profile of the overall political-economic forces going to be used as a framework within which the marketing system is placed.

In the following each of the five approaches will be dealt with in more details.

1. The Adoption-Diffusion Approach

It is well known that the adoption and diffusion process in an atomized structure forms an s-curve. This pattern illustrates a sociological process, where some people are innovators, some are opinion leaders, some are quick to follow, and some are laggards. In a less atomized structure, for example if farming is done on a collective basis, the pattern will be different, i.e. a none or all pattern.

The actual shape of the s depends on several factors like degree of newness, price, whether the farmers are risk takers or not, degree of competition etc.

This process takes place when we have a given product or farming technology for which the producer stimulates demand: Using marketing parlance, this way of conducting marketing activity is called the selling concept. (Kotler 1984).

The situation is rather common in developing countries as the selling concept is often used when Western farming technology is transferred to farmers in developing countries. The technology has proven to be relevant in the West, and it is assumed that it is relevant in other farming settings as well, making the problem one of convincing the farmers to adopt the new technology.

The way this is done is by what is called hard selling methods. In developing countries the new technology is pushed by subsidized prices, extension officers, and credit which is available only if you buy the new technology. If farmers still rejects it, it is often interpreted as a sign of traditionalism and conservatism. It could of course also be that the new technology is irrelevant and too risky for the farmers.

Given that the new farming technology is relevant in the farming setting in question, the theory of adoption and diffusion is useful when studying the introduction of new farming technologies. It points out as mentioned that adopting new technologies is a sociological process, and that within a specific social setting we cannot work with just one profile of farmers. We need more reflecting that some farmers are quick and others for various reasons slow to adopt a new technology.

The adoption-diffusion approach cannot, however, be used unqualified in developing countries for a number of reasons. Four important ones are:

1. Egalitarian political objectives demand available inputs and implements to be distributed on an equal basis.

2. The adoption-diffusion pattern is more complex when introducing new farming technologies to a (semi) subsistence farming community compared to a fully commercialized system.

3. The adoption-diffusion pattern is made complex by the fact that it is difficult to reach those who have the major responsibility for farming, i.e. the women, because husbands are controlling what might be called the strategic relations with the environment.

4. The social network in the farming communities has elements of tradition, elder respect, patron-client relationship etc., which in turn make the farming community less atomized than normally assumed in the s-pattern of the adoption-diffusion-process.

Each of the four qualifications will briefly be discussed in the following.

ad 1. The adoption-diffusion process as described above might be in conflict with the often stated political goal of egality. The s-formed diffusion pattern creates inequality as the progressive farmers are quick to and possess the resources to adopt new technology. They therefore benefit the most. The laggards might even be so late in adopting the new technology that they are squeezed out of agriculture and into landless labour or migrate to the urban areas.

A policy of equality would try to prevent such development by either reforming the agricultural sector or by regulating the marketing system in order to make it allocate supplies on a more equal basis.

The two situations require different organizational set-up of the marketing system.

In case of the adoption-diffusion process in an atomized structure, the marketing system can be restricted to reach only the potential part of the farming community and use opinion leaders etc. to promote the new technology, i.e. for the technology to trickle down. One should here be aware that innovators - the progressive farmers - are not necessarily the opinion leaders as often believed. They are too advanced. The opinion leaders are perhaps chiefs, elders or others with a central position in the social network of the village (=the vertical dimension). It could also be advanced farmers at the same level as one self (=the horizontal dimension). In general one should be aware of a social network where tradition, elder respect etc. work as enforcements of specific ideas.

In case an egalitarian society is advocated, the marketing system faces a great challenge of reaching the smallest farmers and present for them a package of new technology which they can afford and which they are able to use. This type of organization will not necessarily restrict the progressive farmers from developing, but depending on the amount of supplies the risk is that supplies might be spread too thinly to have any effects. (Kitching 1982).

It has proven difficult to etablish a marketing system which is able to reach the most remote rural corners. Private traders combined with periodical markets is one way of doing it, because a private trading system is able to expand and contract rather instantly according to supplies. However, a private trading system of the flexible type has its strenght with given products and technologies. When it comes to new technologies, which requires that the system possesses technological know-how and back up services, the system is less effi-

cient. FAO is trying to improve the system in ASIA by upgrading rural markets in order to make them function as a place for diffusion of new technologies. (FAO 1983).

Co-operatives is another possibility. Here the organizational set-up is of a more 'permanent' character, and the institution is close to the farmers, which should give an ability to accumulate know-how for the benefit of the farmers. The weaknesses are that overheads become too high, that political infiltration is a risk, that social affiliations in the local community might make the co-operative a vehicle for the progressive farmers, and that it is difficult to find people with the managerial know-how to run the co-operative.

Finally, state trading organizations have always had difficulties in reaching the remote areas, because of their hierarchical set-up. The overheads will be too high, and experience has also shown that it is difficult to design an incentives system which make state trading organizations promote new technologies efficient.

ad 2. Degree of commercialization can be measured in many ways. Most studies look at the percentage of produce sold on the market. In Kenya for example farmers are considered to be subsistence farmers if they sell 10% or less of their produce on the market.

The percentage of produce sold on the market has also been interpreted as a measure of Capitalist penetration of agriculture and thereby farmers' dependency on market relations. This, however, is not a good interpretation as farmers can sell produce and buy consumer goods, i.e. reproduce themselves at the present level (i.e. use two of the three principal channels mentioned in figure 1) without becoming capitalist farmers and to-

tally market dependent.

The best way to measure the degree of commercialization is therefore to use ratios of inputs and implements purchasing to produce selling, because when farmers start buying inputs and implements they become more dependent on the marketing system. Expressed with other words, they shift from an ecologically based farming technology to a socio-economic based technology.

It seems reasonable to expect that such a shift is more difficult to make than when already commercialized farmers decide to use a newly introduced input instead of an older one. The subsistence farmers change mode of production and also life style when they become commercial farmers, which in turn means that we should work with more comprehensive models of farming and rural life rather than with marginal decision models.

ad 3. In an adoption-diffusion process we might distinguish between

- user
- purchaser
- decision maker
- people with influence, and
- information receiver.

Sometimes all five dimensions are combined within one person. In other situations each dimension might be attached to separate persons whose interests might be non-compatible.

In case of agriculture the husband has a central position concerning strategic decisions and relations to the environment, while the housewives are doing most of the actual farm work. This division of labour complicates the adoption-diffusion process, not just because someone else than the user decides upon changing

farming practices, but because 1) husbands tend to make decisions which will enlarge their own position in the community and because 2) the users - the women - receive the farming know-how indirectly, i.e. through their husbands, who are the ones who have been on a course or talked to extension officers etc.

This pattern is not easy to change as we touch rather basic values in society, if we attempt to break it up.

Further, the problem has not just one solution. It has to be worked with continueously, using a number of alleys to reach the women more effectively with new farming know-how than today. Examples are: Having women extension officers, using local markets where the women appear and meet, approach self-help groups (Harambee-groups in Kenya), etc. etc.

ad 4: It is often discussed to what extent the Colonial period broke up pre-colonial social ties and created a society of individual and individualistic farmers. A number of cases are evidence to the fact that the degree of individualism has increased. On the other hand not all "old" social relations have disappeared in the farming community, and they might be strong enough to make it difficult for certain "modern" institutions to work in the intended way. An example is the patron-client relationship, which makes it difficult to have democratic institutions, because the patron has a right and almost an obligation to use the institution to the advantage of himself and his clients. Perhaps we in the West are not quite aware of the fact that a number of our institutions require a high degree of individualism in order to function in a proper way, i.e. individualism is an assumption for the modes of cooperation we have in some of our institutions.

This postulate has to be analysed in more details. If it holds it is obvious that by proposing the establishment of institutions which assume a higher degree of individualism than can be observed we establish institutions and organizations with potential corruptive surfaces.

To conclude. The adoption-diffusion approach gives a lot of insight into sociological processes when new technologies spread. The theory behind it assumes an atomized structure and voluntary decisions on part of each farmer. The approach is not directly applicable if farmers in one or another way are "forced" to use the new technology or if it is a political goal to allocate scarce inputs equally among all farmers. In these cases the theory has to be moderated.

2. The Marketing Approach

Western marketing theory has a typology which is used to catagorize the way in which organizations conduct their marketing activity. The selling concept has already been mentioned. In this section we will take a closer look at the marketing concept as a way to approach the marketing and distribution of inputs and implements.

Using the marketing concept the organization's starting point is the needs of the user. The needs are translated into a product concept and further into an actual product.

Schematically the marketing concept can be described as follows:

1. Reveal/uncover needs and communicate the needs to the point of product development or production.
2. Transform the information into product concepts.
3. After production, allocate the produced goods among the users by way of specific allocation mechanism, e.g. the market.
4. Inform/promote and distribute the commodities to the users.

In principle the marketing concept assures that the products developed are relevant to the later buyers and users.

It is an ideal of a demand-pull development and stands as a contrast to the technology push development in case of a transfer of Western farming technology mentioned in the last section.

Even if it is an ideal it has some important messages. It points out the need for close producer-user relations in order to develop a relevant product for the user and a salable product for the producer.

A conceptual framework for the analysis of producer-user relations has been developed by a number of marketing researchers (Lancaster 1966, Roersted 1970, Ford 1979, and Thomassen 1981). These researchers look at a product, e.g. a harvester from a producer and user point of view, and define the product in terms of a set of producer and user criteria. Depending on the set of criteria, dominating the relationship between the producer and the user, we speak of a "technology push" or "demand pull" development, but if the distance between the two sets of criteria is too large, development might stop. The critical question is what dimensions to use to describe and evaluate the distance. Ford (1979) suggests the following five:

1. Social distance, i.e. knowledge of each other and personal contacts.
2. Geographical and cultural distance.
3. Technological distance, i.e. knowledge of products, production and process technology.
4. Time distance, i.e. the time from contact of transaction.
5. Obligations, i.e. the devotion between user and producer.

From the way peasant agricultural development has been practiced in most developing countries, it seems reasonable to characterize it as a primarily technology push development with a relatively large distance between producer and user criteria on all five dimensions.

This is unlike the relationship between farmer and producer of agricultural inputs in the Western countries. Here, by dividing the product into an idea, construction and production phase, the user criteria tend to dominate in the beginning, but at a later stage the producer criteria dominate for the reasons that the basic product concept has proven to be relevant and because, when the producer has established a factory, bought machinery etc., he becomes rather inflexible in his production, and conduct his marketing activity according to the selling concept mentioned in the last section.

Thus, to make the peasants adopt new and relevant technology, their user criteria must have a bigger say and the distance on all five dimensions must be reduced by altering the organizational set-up around R&D and coordinate the marketing system and the R&D-system. Harper and Kavura (1982) have a case story, which comes close to these requirements.

In Kenya The Kenya Seed Company in Kitala seems to have been quite successful in developing maize seed for primary the fertile soils and to some extent also for the semi-arid areas. A closer look at its organizational set-up and how it rates on the 5 dimensions of distances might give inspiration to the organization of R&D-activities aiming at for example the semi-arid areas, which are in the proces of being settled due to the population pressure.

3. The Industrial Organization Approach.

The industrial organization approach is concerned with the structure, conduct and performance of markets. Its starting point is the perfect market, and any deviations from this makes resource allocation less efficient.

The approach can be used in two ways. By looking at the overall structure of the chain of production/distribution we are able to say something about the overall efficiency of the chain. Secondly, by looking closer at each (horizontal) le-

vel of the chain, we are able to say who will get what share of the total profit in the chain.

The approach has been widely used, especially with respect to the marketing of agricultural produce (Weber and Riley 1979). The main problem revealed when using the approach is that an atomized or fragmented structure, for example small scale farmers, numerous consumers and small scale retailers, face a concentrated structure which directs the chain and gets the larger share of total chain profit.

The situation is a little different in case of the marketing of inputs and implements. Here an atomized structure (the small scale farmers) is often left aside to the advantages of few socalled progressive farmers. They face a rather modestly developed marketing system, which again face a monopolized and Government controlled import and production structure.

To this can be added that as extension services, credit and commodities each flow through a separate channel, the coordination of the chain becomes rather complicated.

In this situation it is perhaps not surprising that already Ruttan (1967) in a study of agricultural produce and factor markets in South East Asia found that in case of food the marketing system transmitted prices from one level to another in an efficient manner and that the supply of marketing facilities approximated perfect elasticity.

When it came to the factor market, Ruttan found it to be less efficient and the supply of marketing facilities less perfect, the reason being that it is much more difficult to organize the channel for inputs and implements.

The main reason for the difficulties is the fact that this channel deals in new technology, which again means that the hard ware - the commodity itself - must be accompanied by an equally important soft ware - technological and organizational know-how.

The problem is so serious that it is referred to that branch of industrial organization, dealing with the failure of the markets rather than with the imperfections of the markets.

Interesting enough we might here find inspiration in the literature on foreign direct investments and specifically in the writings of Johnson (1970). He found that markets for knowledge are difficult to organize and therefore often non-existent with the result, that rather than using external modes for the transfer of knowledge, internalization within the firm, i.e. the transfer of knowledge within the firm can be done at lower costs. Big agro-industrial companies like Del Monte in Kenya are cases in point, but also contract farming - of which Kenya has a good deal - is an illustration of the difficulties of getting an increased production through market transferred new technology.

We have not thereby said that agricultural development can only be done by forward integration, but pointed out that the knowledge component apparently is the critical factor in organizing the channel. We should therefore take a closer look at how know-how and commodity use can go hand in hand, e.g. by having extension officers attached to retail shops for inputs and implements, or to what extent packages of inputs are the way to solve the problem etc.

4. Market Hierarchy Approach

One of the most promising approaches to increase our understanding of the marketing of agricultural inputs and implements is the market-hierarchy approach.

This approach critizices the neoclassical assumption of zero transaction costs when operating a market and asks the question: Under what conditions will the market or the bureaucratic/hiererchical mode of organization be chosen. The question is answered by thinking transactionally, and the approach draws on and combines economics and organization theories.

By doing so the approach creates a foundation for a less ideological discussion of different modes of organization and transactions. "..by not assuming the primacy of one organizational mode over the other, the door is open to the investigation of the relative merits of each mode for a given environment and the kind of transaction involved". (Calvet 1981, p. 53).

The market and the hierarchy are two extreme modes of organization. Inbetween we have different types of organized markets (Arndt 1981) as for example contract farming (Buch Hansen og Marcussen 1981) and partly vertically integrated chains of production and distribution. The approach thus covers a number of actual modes of organizations as we find them in Kenya and other developing countries.

Before we take a closer look at the approach, let us briefly look at the ways in which it can further our understanding of marketing and distribution of agricultural inputs and implements.

First of all it can give us new insights by throwing new light on the debate of fragmented versus vertically integrated marketing systems (Bucklin 1970). The latin American Studies Centre at Michigan State University was a devoted spokesman for integrated channels (Harrison et al. 1974), whereas Dannhauser (1981) pointed out the merits of more flexible channels. As we shall see below, Williamson (1975) puts forward a model for choosing between a market mode and a bureaucratic mode of transaction, whereby he in principle resolves the conflict.

Secondly and as already mentioned, the market or hierarchy approach opens up for an unprejudiced debate on the various modes of organization and transactions, leaving ideological overtones on the side line.

Thirdly, allthough the market and hierarchy approach assumes

a private enterprise system, it should be possible by develing the approach further to be able to throw some light on marketing systems consisting of state trading organizations and co-operatives. As these two types of institutions are so commonly used in the marketing and distribution of inputs and implements this development is important.

In short, the market and hierarchy approach tells us when a privat enterprise system will choose to use the market or integrate vertically, i.e. substitute the market for a hierarchy. The question to deal with is to what extent can the approach be applied to/developed to cover also state and co-operatives.

One of the most prominent scholars in the field of markets and hierarchies is Williamson (1975). He presents the approach as follows (p. 9):

"The market and hierarchies approach attempts to identify a set of environmental factors which together with a related set of human factors explain the circumstances under which complex contingent claims contracts will be costly to write, execute, and enforce. Faced with such difficulties, and considering the risks that simple (or incomplete) contingent claims contracts pose, the firm may decide to bypass the market and resort to hierarchical modes of organization. Transactions that might otherwise be handled in the market are thus performed internally, governed by administrative processes, instead."

Oversimplified we might say what Williamson adds the human dimension to Micro Economics.

Figure 3 shows the transactional paradigm by Williamson. He holds that the advantage of the hierarchical solution - the internal organization soloution - is the possibility to have an adaptive and sequential decision making process, which deals with issues when they arise rather than in an exhaus-

FIGURE 3: The Transactional Paradigm by Williamson

Environmental Factors:	**If...**
Number of firms:	number of firms is small,
Level of information:	uncertainty is high,
Human Factors:	
Type of rationality:	rationality is bounded, and
Degree of opportunism:	market participants are opportunistic,
	... then markets are substituted for hierachies, i.e. marketing activity is eliminated, and substituted for internal organizational procedures and decision making and substituted for internal organizational procedures and decision making.

tive contingent - planning fashion from the outset (p. 10).

The next step using the market-hierarchy approach is to confront the conceptual framework by Williamson and others with the realities of a developing country - in casu Kenya.

5. The Political-Economic Approach

Government interventions aim at 1. genuine development of the agricultural sector as one extreme or ideal and at 2. enriching a state class, who fight to stay in power as the other extreme.

In other words the political-economic approach discusses interventions in terms of how they benefit one class over the other. In relation to agriculture the main issue is the conditions under which peasants are captured (Hyden 1980) and integrated in the wider economy.

In practice it is often difficult to see whether an intervention aims at point one or two above. This is especially true in more or less democratic developing countries, where you cannot persue your own enrichment by force as in dictatorships. To fulfill aim two you must therefore choose interventions which simoultaneously can be interpreted as aim one interventions. An example is a state trading organization. This complicates the analysis of interventions.

As to the marketing system, it has traditionally not been central to an understanding of struggles between classes and interest groups. The marketing system belongs to the sphere of circulation, and this is only second in importance, the most important being the material production.

This might be correct when we look at fully commercialized economies, but it seems to me that marketing systems are important in the understanding of the struggles in developing countries, where a subsistence mode of production face a more commercialized mode of production. The marketing system is in

the midst of the struggle as it links economically the various classes and interest groups. Control over the marketing system is therefore not unimportant, because it gives you access to and enables you to direct the flow of commodities. Further, if the banking system is poorly developed, the marketing system might also be (mis)used to appropriate surpluses from for example the rural areas to urban areas.

If this reasoning holds, it gives us an explanation for the numerous reorganizations of the marketing system, which take place at frequent intervals and mostly without plan.

But does it hold? Two recent studies of the relationship between the market and the state (Bates 1981 and Hill 1984) reveal that state interventions are often detriment to the development of the agricultural sector and politically rather than economically determined. Part of the explanation is also bad management.

Bates (1981) mentions the example of pricing of inputs and implements. Prices are often subsidized - also in Kenya - and this might be interpreted as an attempt to speed up the diffusion of for example a new seed. When he next looks at the prices for agricultural produce, he finds that they are kept down and the terms of exchange between the urban and rural sector have developed to the disadvantage of the farmers. Thus, the subsidy is given in order to keep f.ex. food prices down in order to avoid urban unrest.[1)]

The difficulties involved in analyzing interventions are made clear in Colclough (1985), who points out that only recently have major international aid agencies like the World Bank seen price policies as a major tool for developing agriculture, indicating that their profile of the farmers was not

---

1) The deteriorating rural terms of trade in Kenya have come to a halt in the later years (see part B).

the entrepreneurial type of farmer before. Theories of development thus have their share of the blame for the modest results in agriculture.

Even so, there is evidence enough to the fact that marketing systems and indeed the channel for inputs and implements are used as political tools. The political-economic approach is therefore relevant to broaden the understanding of the organization and working of the channel, and give us an overall framework for the detailed analyses of the channel for inputs and implements.

Looking across the five approaches the four of them are complementary and the fifth - the political-economic approach - might be complementary, but might also be detrimental to the usefulness of the other four.

The two former approaches deal with the relation between the marketing/production system and the farmers. The product development approach gives a better understanding of the conditions under which relevant inputs and implements are produced, and the adoption and diffusion approach furnish us with a better understanding of the sociological processes, which are at work when a new technology is being considered and adopted in the farming community.

The industrial organization and the market-hierarchy approach are both concerned with the organization of the chain of production/marketing. The former has its emphasis on economic efficiency within specific horizontal structures, but of equally importance and relevance to the issue at stake is the branch of industrial organization, which deals with market failures. In general the industrial organization approach is not strong on areas where technology changes, but here the approach can be supplemented by the market-hierarchy approach, which lays down the conditions for choosing one mode of organization and transaction, for example the market, for another.

To use the four approaches it is essential to have good profiles of the farming community as these are crucial inputs to the above analysis. It is also important to use the political-economic approach, because this approach gives the overall social framework within which the analysis takes place. A given approach is applicable only under certain conditions. If the political-economic approach reveals that politicians and administrators only pay lip service to agricultural development and that they are out in quite another erind, it is of no use to continue. At best your work is irrelevant. At worst it can be used as yet another tool in the hands of those in power.

5. CRITERIA FOR THE ASSESSMENT OF THE MARKETING SYSTEM FOR INPUTS AND IMPLEMENTS

To assess the present marketing and distribution system for inputs and implements a set of criteria is needed. But which criteria should be used?

Economic efficiency is certainly one of them, but is that enough? How much understanding of the organization and working of the marketing system do we get if we measure solely the economic efficiency of the present marketing system? Not enough. What use do we have of a highly cost efficient system, if the system is ineffective in the sense of not being able to persuade farmers to use a new relevant input? Or if the system is not able to deliver inputs in a steady manner?

The assessment criteria must therefore basically be derived from the needs of the farmers, i.e. be based on our profiles of farmers, and/or be based on the politically stated goals, i.e. the objectives of the politicians.

In doing so, we arrive at a set of criteria through which we can assess the present system:

1. Acceptability

Which marketing institutions are morally and politically acceptable, i.e. what is the overall framework within which the marketing system is allowed to develop?

Following Islam, for example, you cannot earn interests on your savings; In other countries private enterprices are per definition exploitative and consequently expelled; Certain types of institutions are developed (e.g. state trading organizations), because they attend to the interests of a powerful group etc. etc.

As marketing researchers we might not like all these conditions and restrictions put on the development of the marketing system, but it is essential that our evaluation of the system accounts for what is acceptable and what is not, because this gives an explanation of an inefficiency in the system.

Comparative studies might of course reveal that with other moral and political conditions it is possible to establish more efficient marketing systems, but if the institutions to be establish according to these new conditions are non-acceptable, what can we as researchers do about it? Must we not accept the conditions and establish 'the economics of the acceptable/accepted institutions', as for example Micro and Business Economics in case of a market economy?

2. Efficiency

Efficiency is defined as the minimum input of resources for a given output. The basic question is to what extent the marketing function can be performed at lower costs.

Marketing costs are both functional expenses and institutional costs. In the former case it might be possible to reduce costs by for example changing the mode of transportation (e.g. from truck to rail haulage).

In the latter case - the institutional costs - efficiency is discussed at two levels. We might at the higher level discuss the efficiency of the acceptable institutional arrangement (re: point 1) versus the efficiency of an alternative arrangement, e.g. markets versus state trading.

At the lower level we will look for improvement in the present institutional arrangement. In a market economy, for example, we most likely will use the structure-conduct-performance model to find out whether the performance of the system can be improved for example by changing the market structure. In case we work with a state trading system, we would look for the possibility of organizational rationalization to improve efficiency.

3. Effectiveness

In a number of instances it is more important to get things done than to be very efficient. In the case of hunger releaf you might not have the time to consider if you bring the food to the areas of starvation in the most efficient manner. The main purpose is that it get there. In case of a development plan, you have your goals i.e. where you want to be in five years from now, and you allocate the necessary resources to reach the goal. Unforseens might, however, force you to do things less efficient to be able to be their in time.

This is not to say that there is a basic conflict between effectiveness and efficiency. A given goal should of course be reached using a minimum of resources. But if we concentrate on efficiency, it will be difficult to understand, what goes on in a developing environment with its many unforseens.

4. Equality

Equality is defined as the ability (on part of the marketing system) to further socio-economic egality.

In many developing countries a primary goal is to create an egalitarian society. As the marketing system relates people economically the system is in the midst of any tendencies of economic differentiation. At the societal level the marketing system must therefore be evaluated from the point of view of its ability to prevent any economic differentiation. At the lower level the question might be the system's ability to deliver e.g. inputs and implements to large scale as well as small scale farmers.

Obviously one would have to study carefully a marketing system based on the market mechanism as it is well known that such a system has a tendency to promote inequality. This does not mean that one cannot use the market, only that it is necessary to monitor it carefully to adjust for any tendencies to further differentiation.

5. Controllability

Controllability is defined as the ability to direct the marketing system.

Part of the reason for the economic inefficiency of marketing systems in developing countries can be found in the endeavors on part of the Government to control the marketing system. As scholars we might and should point out the inefficiency which follows from such interventions, but if we device a more efficient but less controllable marketing system chances are that the system will never be implemented.

Government control is associated with people trying to enrich themselves and Governments defending their political position, turning the marketing system into a political tool rather than an economic system. This apart, Government control takes many other and more acceptable forms, and unless we as scholars take into account the issue of control, we will not be able to understand the working of marketing systems in developing countries. The marketing system is part of a political-economy, and we must evaluate the system accordingly.

6. Dynamics

Dynamics is defined as the marketing system's ability to adjust to short and long term changes in production/consumption as well as the ability to act as a change agent.

In the long run the marketing system must adjust to higher levels of per capita income and a wider division of labour. This requires both quantitative and qualitative changes of the marketing system.

In the short run, the system must be able to expand or contact due to fluctuations in supplies and demands. Here we face primarily quantitative changes.

Long term changes requires the accumulation of capital to be invested in new marketing institutions while old institutions are made redundant. In other words, profit must be higher in the context of development compared to the much simpler situation, where present institutions are to be reproduced.

Short term adjustments to for example a decline in supplies require a very fast deployment of resources in order to keep the system efficient. In a traditional marketing system, for example, this means a reduction in the number of traders from which social problems might arise.

Again, to understand the working of the marketing system it is necessary to go beyond the question of pure economic efficiency.

7. Stability

Stability is defined as the steadiness of the flow of goods and services.

Stability in the flow of goods and services is essential if we for example want a subsistence farmer to become a commercial farmer and thereby become dependent upon the marketing system for his supplies and the selling of his produce.

We tend to praise a system where prices adjust according to supplies and demands, but this is not enough for the farmers to become commercial farmers. They must be assured of a steady performance before they switch from the traditional ecological dependency to a dependency on human systems.

The presented criteria are all essential to the understanding of the organization and working of marketing systems in developing countries. The aim of presenting them have not been to deny the importance of economic efficiency, only that there is more to it than efficiency. We might look at the complementary criterea as explanations of inefficiency and calculate the consequences, or we might look at all the criteria as equally important and include them in a model of how marketing systems function and develop.

Fulfilling all 7 criteria is an ideal and hardly possible. A state trading system might be acceptable and give the Government control over the flow of commodities, but it is almost per definition less flexible, and experience has shown that state-trading institutions are not very efficient. Figure 4 gives a preliminary profile of each of three marketing institutions with respect to the 7 criteria.

Further, some of the criteria can be measured quantitatively (e.g. efficiency and stability) others cannot (e.g. acceptability). Thus, it is not possible 'to add' the criteria and come to the overall best marketing system.

6. WAYS TO ORGANIZE THE MARKETING AND DISTRIBUTION OF INPUTS AND IMPLEMENTS

On the basis of our findings from using the various approaches to the study of the marketing system (section 4) and the profiles of farmers (part B), it will be possible to propose a specific way of organizing the marketing and distribution system and advising on the content of the marketing activity programme.

FIGURE 4: Profile of Principal Marketing Institutions

	The private enterprise trader	The state trading corporation	The co-operative
Efficiency	+[1]	÷[2]	-
Effectiveness	-	+[3]	+
Dynamics	+	÷	+
Stability	-	-	-
Equality	÷	+	+[4]
Acceptability	- (÷)	+ (-)	+
Controllability	-[1]	+	-

1. Depending on the structure of the trade.
2. Empirical evidence.
3. In the sense of persuing politically determined goals,
4. In the sense of one man one vote, but not always in the sense of promoting economic equality.

This cannot be done yet, but below is given a brief overview of alternative ways of organizing the system.

We might distinguish between 5 approaches to organize the marketing system:

1. The Searching Farmers Approach.
2. The Presentation/Demonstration Approach.
3. The Demand Development Approach.
4. The Contracting Approach.
5. The Forced Use Approach.

Ad 1. The entrepreneurial farmers will start on their own to search for new ways of farming and means to realize them. Their search and the realization of their plans might be hampered by a passiv/reluctant marketing system, but this will not prevent the farmers from carrying the ideas through. They might even think of establishing own shops or co-operatives to overcome the problems.

Ad 2. Facing less searching farmers but still farmers with an entrepreneurial spirit in the sense of risk taking and experimentally minded, actual presentation of inputs/implements might be enough to trigger off a reaction. Presentation might take place by investing in inputs/implements outlets within the reach of farmers (4-5 kilometers). Either the shops or the extension officers must be able to follow up on the presentation of the new inputs/implements. The Fiss-stores in Kenya are examples of this approach with emphasis on nearby availability of inputs/implements.

Included in this approach is also the socalled demonstration plots. The demonstration plot is based on the idea that if farmers experience the success of a plot, they will adopt the same technique at their own farm, i.e. the technology will diffuse, or trickle down e.g. in case a progressive farmer has adopted the new farming technique.

Ad 3. Facing potential or dormant entrepreneurs, the demand creating approach might be used. Demand development is well known from Western countries with its domination of buyers markets. You might go as far as saying that this is all what Western marketing theory is turned on.

This approach can be subdivided into the selling approach and the marketing approach, the former pushing the farmer hard to use a given input/implement and the second working more closely with the farmers in developing suitable inputs/implements. The selling approach is typical of a technology transfer approach to development (technology push). The latter is used when for example local R&D activities are needed to develop suitable inputs/implements (demand pull).

Included in the marketing approach is also the situation, where farmers e.g. as socalled 'self-help groups' take the initiative. Such groups might turn things around in the sense that they become aware of their needs and demand certain changes, rather than just reaching for what is presented by outsiders. In this case the marketing system must be organized to capture these signals from the farmers, test them and turn them into useful inputs and implements.

Ad 4. To take away farmers' risks economically as well as reducing the problem of technology transfer, suppliers of inputs/buyers of output (=agro-industry) have developed a contractual arrangement which stipulates what, how and at which prices the farmers are to produce. The contractor delivers the necessary know-how to use them.

The involvement by the farmers varies from as little as "renting" their land to the contractor over the use of their labour, and at the other end farmers must possess some know-how to fulfill the contract.

Ad 5. During the Colonial period it was common to stipulate

for farmers what to produce. After independence this enforcement of farmers was naturally abolished.

In spite of this it has not been uncommon to see a three stage development from 1. appeals to farmers to produce certain crops over, 2. special incentives like schools, dispensaries, piped water to make them produce specific crops, to finally, 3. demanding by legislation or otherwise the farmers to use certain plots for certain crops, and in some instances to use certain types of inputs.

The 'forced' approach is officially used by Governments because farmers are reluctant to modernize agriculture and contribute to the supply of food to urban areas. Unofficially the approach is sometimes used to appropriate a surplus whether in kind or money from the farmers, who are reluctant because it is uneconomically for them, and perhaps because they foresee the danger of becoming too dependent upon a marketing system, which is unstable and heavily politically infiltrated.

LITERATURE

Arndt, J (1981): The Political Economy of Marketing Systems: Reviewing the Institutional Approach. Journal of Macro Marketing, vol. 1., no. 2.

Bates, Robert H. (1981): Markets and States in Tropical Africa. The Political Basis of Agricultural Policies. Berkley: University of California Press.

Buch-Hansen, Mogens and Henrik Secher Marcussen (1981): Contract Farming and the Peasantry. Case Studies from Kenya. Research Report no. 18. Institute of Geography. Roskilde University.

Bucklin, Louis P., ed. (1970): Vertical Marketing Systems. London.

Calvet, A.L. (1981): A Synthesis of Foreign Direct Investment Theories of the Multinational Firm. Journal of International Business Studies, Spring/Summer.

Colclough, Christopher (1985): Competing Paradigms in the Debate about Agricultural Pricing Policy. IDS-Bulletin, vol. 16, no. 3.

Dannhaueser, Norbert (1981): Evolution and Devolution of Downward Channel Integration in the Philippines. Economic Development and Cultural Change, vol. 29, no. 3.

FAO: Small Farmer Marketing Improvement in Asia. Bangkok 1983.

Ford, D. (1979): Developing Buyer-Seller Relationship in Export Marketing. Organisation, marked og samfund, vol. 16, no. 5.

Harper, M. and R. Kavura, eds. (1982): The Private Marketing Entrepreneur and Rural Development. FAO Agricultural Services Bulletin, Rome.

Harrison, K. et.al. (1974): Improving Food Marketing Systems in Developing Countries: Experiences from Latin America. Research Report no. 6. Latin American Studies Center, Michigan State University.

Harriss, Barbara (1984): State and Market. State Intervention in Agricultural Exchange in a Dry Region of Tamil Nadu in South India. Concept-Pub. Co. New Delhi, India.

Hyden, Goran (1980): Beyond Ujamaa in Tanzania. Underdevelopment and an Uncaptured Peasantry. London.

Johnson, H.G. (1970): The Efficiency and Welfare Implications of the International Corporation. In The International Corporation, edited by C.P. Kindleberger. Cambridge, MA.

Kitching, Gavin (1982): Development and Underdevelopment in Historical Perspective. Populism, Nationalism and Industrialization. London.

Kotler, P. (1984): Marketing Management. Analysis, Planning and Control. Prentice Hall.

Lancaster, K. (1966): A New Approach to Consumer Theory. Journal of Political Economy (April).

Riley, Harold M. and M.T. Weber (1979): Marketing in Developing Countries. Working Paper no. 6. MSU-Rural Development Series. Dept. of Agricultural Economics. Michigan State University, East Lansing, Michigan.

Roersted, B. (1970): Anatomies of Marketing Action within a Structure of Marketing Activity. Aarhus, Denmark.

Ruttan, V.M. (1967): Agricultural Produce and Factor Markets in South-East Asia. Dept. of Agricultural Economics, University of Minnesota.

Sørensen, O. Jull (1984): Profiles of Peasants and the Implications for Marketing System's Development. The case of Tanzania, Working Paper Series no. 14. AUC 1984.

Thomassen, Finn (1981): Producer-Consumer Relations in Product Development in the Agrigultural Machine Industry. Småskrift no. 24. Institute of Production, Aalborg University, Aalborg, Denmark. (In Danish).

Williamson, O.E. (1975): Markets and Hierarchies: Analysis and Antitrust Implications. New York.

PART B: PROFILES OF FARMERS IN KENYA

1. ESTABLISHING PROFILES.

" 'Are you going to plant more maize?' Ouma Samual, a small-scale farmer was aksed. ' What for?' He asked, 'This is more than enough for my family until next year's harvest - that's after I sell off what I need for school fees and other necessities.' 'Why should I grow maize to sell to the board[1)], when all I will get is a price of paper instead of money. It takes the time and trips to the board depot before I am actually paid.' Ouma has more than 20 acres of fertile land[2)] and could produce a substantial crop. But he has little incentive and guidance to do this. Allthough in the past few years the Kenyan authorities have tried to create the right price incentives for food crop cultivation, this has been done on a very adhoc basis. It makes little sense to increase the price of maize by 50% when there is a drought. Besides little is often done about reducing the costs of labour and farm inputs. Only recently did the Kenya Government take steps in this matter." (Farming Review, Feb. 1. 1985, p. 2-5).

This first draft of a profile of the Kenyan farmer shows:

- that farmers are market integrated, but subsistence also plays a role in their decision making as to which crop mix to grow.
- that farmers are believed to be sensitive to price incentives and entrepreneurial, and
- that the Government is beginning to develop a more consistent policy to capture the entrepreneurial farmers.

The Development Plan 1984-88 reveals the same picture:

"Price policy is of extreme importance as farmers in Kenya have shown themselves to be highly responsive to changes in the relative proces of agricultural products. Therefore, prices recei-

---

1. The National and Cereals Produce Board, which has a monopoly on maize buying and into district maize movements.
2. In Busia District of Western Kenya.

FIGURE 1. PROFILES OF FARMERS IN KENYA.

	Primarily Subsistence Farmers	Market Dependent but Non-accumulating Farmers	Market Integrated and Accumulating farmers
Type of production	Subsistence	Wide crop mix	Some specialization
Sell Produce & Livestock	Very little[1)]	Yes	Yes
Buy consumer goods	Essensials[1)]	Yes	Yes
Other expentures	Very little	School fees	School fees, etc
Buy inputs	No[1)]	Some	Yes
Hire labour	Use family labour	Very little. Only under specific circumstances	Yes
Sell labour	Use family labour	Yes, farm labour	No
Non-farm income (wages)	No	Little	Yes
Use credit	No	Seasonal	Yes
Take loans	No	No	Yes
Invest in a) agriculture: 1. Land and yield improvement 2. More land	Very little	Very little	Yes
b). non-agriculture	No ↓ ?	No ↓ ?	Yes ↓ ?
	potential market relation or landless	potential accumulating farmer	potential industrialist

---

1. These farmers are using the market primarily to facilitate reproduction, i.e. selling a little surplus produce and buying consumer goods or using 'free' Government services, but they are not dependent on the market for inputs etc.

ved by farmers are an important part of the incentive system. Prices not only are a major determinant of farmers' income, but they also affect how resources are used, patterns of consumption and the rationing of product use over time. Farm prices must be high enough to make it profitable for farmers to fully utilize land and other resources instead of having them lie idle." (p.179).[1] Further:

'...rural development requires ready access to urban markets because without that access the rural people cannot aspire to more than a pure subsistence livelihood. There is simply no sense in producing more than a family reqiures without access to markets.' (p. 58).

Finally, 'Improving the domestic terms of trade of farmers is a strong incentive for increasing rural employment as well as output. Increase in agricultural output through using more land and increasing yields also increases the demand for labour.' (p.62).

Thus, the Development Plan leaves no doubts whatsoever that tne farmers are responsive to market incentives and that they base their decisions on the final account of three channels: The produce or income channel; The inputs or cost channel; And the consumer goods or spending channel.

It is also clear from the plan that 'District focus' and the higher priority accorded rural development (p. 39) must be understood in the light of the need to create approximately 275.000 new jobs each year, the overwhelming majority of which must be found in the rural areas. (p. 62).

Looking more closely at the farming community and the rural development processes, it seems purposeful from a marketing point of view to distinguish between 3 groups of farmers (see Fig. 1 and 2):

---

1. The difficulty of implementing this policy is clear from other sections of the plan, e.g. setting prices at levels that reflect changes in import and export parities (p. 178) and the cost of living in urban areas. (p. 61).

1. The subsistence farmers, i.e. farmers, who sell less than 10% of their output (produce and livestock)[1] and more important who buy little or no inputs.[2]
2. Market dependent but non-accumulating farmers i.e. small scale farmers, who have none or few resources to expand their farm whether we speak of buying land, using labour, improve knowledge, capital, or off-farm income.
3. Market integrated and accumulating farmers, i.e. medium and large scale farmers with enough resources to expand agricultural production as well as diversify their investments.

The profiles are dealt with in more details in the following. It is, however, important to stress that the profiles are stero-types, emphasizing important charcteristics. Any given community will have farmers on a continuum from subsistence to accumulating farmers.

2. RELATIONSHIP BETWEEN THE PROFILES.

1. Rural - Rural Relations.

It is the clear policy of the Government to integrate the farmers in the market on the assumption that the expansion of the monetary economy will spread prosperity even to the remote regions of the country (Development Plan pixi).

The importance of the marketing system will therefore increase in the years to come, and following the Development Plan the market forces will be less administered and more free in the future.

Looking at the various regions in Kenya, it is clear that some regions are dominated by mainly subsistence and market dependent farmers (Coast, Nyanza, Eastern) and some dominated by market de-

---

1. Following IRS-4, 45% of all small-scale farmers (less than 20 acres) produced for 'mainly subsistence'.
2. Unless otherwise stated inputs means all types of commodities.

pendent and accumulating farmers (Central, and Western).[1)]

More important than to catagorize the provinces is it to look at the development forces at work.

All primarily subsistence farmers are being more and more market integrated. This might happen quickly as in West Pokot due to a disaster (in 1979/80) and the finding of gold (Dietz and Haastrecht 1983) or it might happen more gradually through the normal work of the market forces and Government and District development programmes. Especially, the 'District Focus for Rural Development' can be an efficient tool to promote market integration (and to lessen the human costs, which normally follow a change from subsistence to market production).

It is also important to stress the interrelationship between the market dependent and the accumulating farmers. Unless the former group prosper, the accumulation by the latter will be constrained (or new accumulation avenues will have to be found).

The accumulating farmers need labour on their farm, but as the accumulation also takes place by diversifying investments[2)] into rural, non-farming undertaking (shops, hotels, transport etc), the profitability of the investments depends on the buying power of the rural population. There is, thus, a rural-rural economy with some economic development forces of its own, allthough they will be halted, if the rural-urban economic relations are not working.

The rural-rural relation tends to create polarisation unless new avenues for income are developed for the market dependent farmers. Such avenues can to some extent be found in settlement on new land, but two others are also open:

1. Non-farm income from wage labour earned by educated children.
2. Intensification of land use and new crops.

---

1. All small scale farmers are better off east of the Rift Valley, independent of potential of land. Farmers in highly potential areas are better off than farmers in semi-arid areas.
2. They also buy more land, sometimes not for farming but to resell later or to obtain loans.

The former avenue depends on the creation of new jobs in the informal and modern sector. The prospects are not the best as there will be few jobs in excess of what can be filled by the better educated children of rural and urban elites.

The second option depends on the development of new or improved techniques of production and/or a change in the production mix.

The hybrid and composition maize 'postphoned' the exit into landlessness. The trend towards a mix of crops and improved cattle and livestocks is a new basis for agricultural development as is the change from high volume-low value to low volume-high value crops like vegetables and fruits. Further, improved seeds of millet, sorghum and the drought resistant crops is another avenue, and a very important on as it will open up for new land in the semi-arid areas.

The continuation of the present processes are, thus, dependent on finding a viable economic basis for the present non-accumulating farmers. In turn this will create entrepreneurial accumulating farmers, who will not restrict themselves to establishing marketing co-operatives, but who will diversify their investment portfolio and perhaps be pure industrialists by vertical integration into rural agro-industrial undertakings. At least it seems likely that capital and perhaps also management can be derived from agriculture.[1)]

To conclude, the Government lives on a 'postphoned' creation of a poor farmer and landless class. Unless new income avenues (and drought and other disaster releases) are found continously, they will face a polarization and poverty. This is more so because of the high population growth.

2. The rural-urban relations.

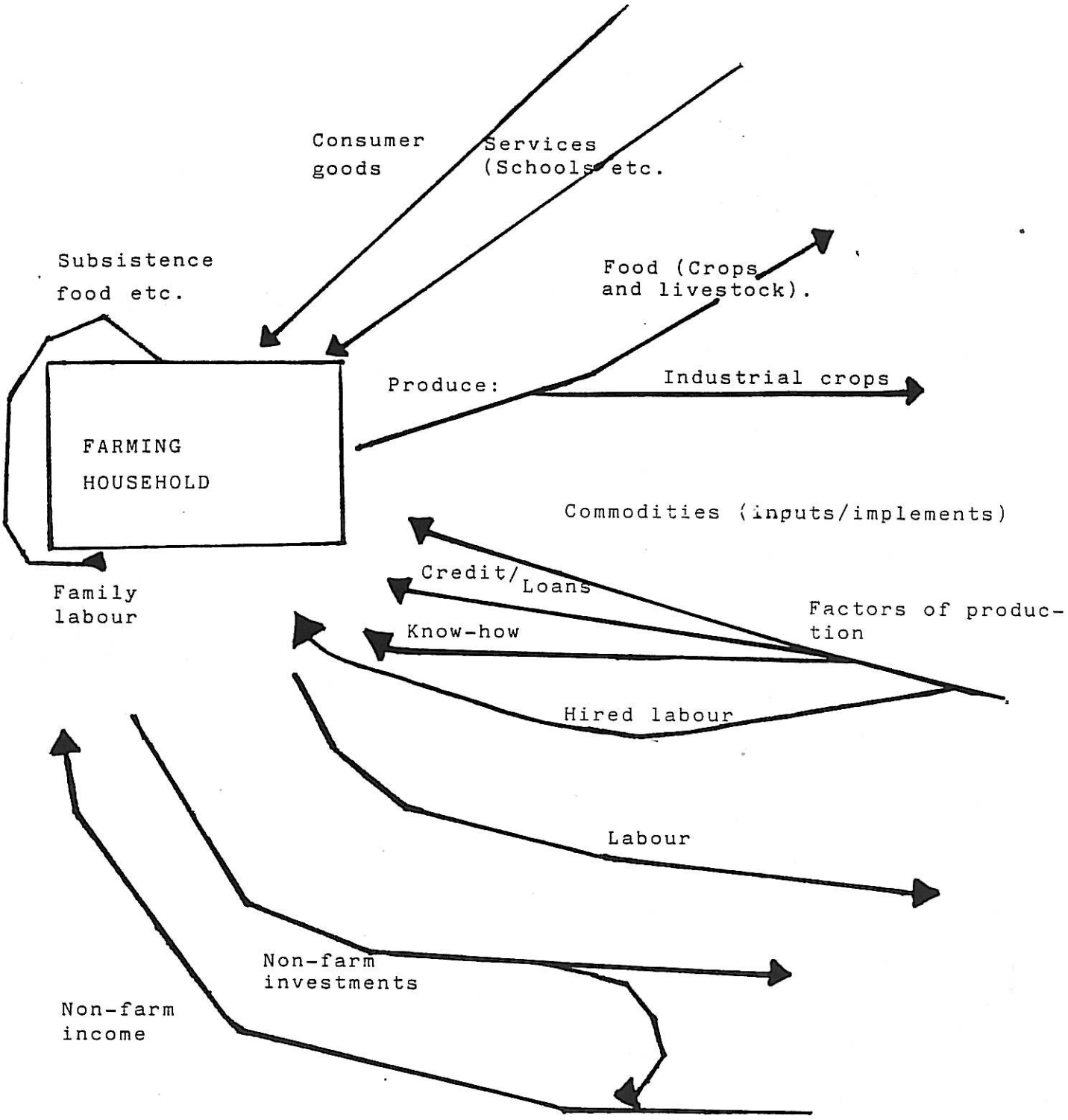
As already stated, focus is on rural development, but rural development depends critically on linkages between the rural areas and the urban centres. (Development Plan, p.58).

These linkages are normally thought of in terms of 'terms of trade' between two districts productive groups, with no other relation than

---

1. There were 51.000 businesses in the rural non-agricultural sector in 1968, of which 75% were owned by farmers (Farming Review, Feb. 1, 1985, p.11 and Schluter (1984).

Figure 2. THE MARKET INTEGRATED FARMER.



the exchange of agricultural produce for consumer goods and some inputs as well as a flow of labour from rural to the urban area. This is a too simplistic picture in the Kenynian case.

The terms of trade have deteriorated over the years, i.e. an urban bias can be observed. The agricultural sector's terms of trade stood at 95.6 in 1979 and declined to 80.0 in 1982. In 1983 it came to a stop with the terms of trade amounting to 81.9. This trend has continued in 1984 and 1985 due to large increases in the prices, especially for food crops (Economic Survey 1984, p.112-13). Maize, e.g. rose from Shs 146 per bag (90kg) in 1983 to Shs 200 per bag in 1985. These are the official prices, paid by the National Cereals and Produce Board.

From a development point of view the flows of people and capital are very important. A deterioration in the terms of trade means in itself an outflow of capital from rural areas. To this can be added the taxes on export crops to be paid to the Government.

What seems, however, to have much influence on rural-urban retationship is the attachment to the rural area, which most urban dwellers have. This attachement have two dimensions. One is that remittances are send to the rural areas to be used to buy food, pay school fees, hire labour to clear the land because the husband is absent, to defend the rural dwellers against unfavorable terms of trade, or to try out new agricultural practices. When the urban dweller visits the rural areas, food is, of course, moving the other way.

The second dimension is that there is a movement of people back from the urban to the rural areas to take up farming. There is an attachment to the soil and to farming, and this attachment between rural and urban areas seems to have two effects, namely

1. Urban non-farm income which either lessen the effects of the deteriorating terms of trade or can be used to take advantage of new farming techniques or used in the education of the children, thereby generate more non-farm income.[1)]

---

1. Haugerud (1980) found that market dependent farmers used most of their surplus to pay for education.

2. Lessed polarization between the urban and rural areas.

Due among other things to an overall good infrastructure the movement of people (and commodities)are relatively easy, so that the constraints on the stipulated relationship will not come from there. It is more likely to come from people without jobs, who feed on relatives with jobs in the urban areas, thereby putting an end to the remittances from urban to rural areas.

3. DIFFUSION OF INNOVATIONS:

Many criteria must be met for a new production technique to be adopted by farmers. Most important are eco-feasibility, economic viability, cultural acceptability (risk, diet etc), factor endowment requirements, technical know-how, and a reliable marketing and distribution system.

The Kenyan diffusion setting can be described in 9 points:

1. The setting is an atomized setting, meaning that each individual farmer can decide to adopt or reject a new technique or new crop. As there are numerous small farmers, we can with some qualifications expect the 'normal' pattern for diffusion.
2. Kenyan farmers have proven to be receptive to newness. The case in point is hybrid maize, which spread throughout the country in about 10 years. Small-holder tea and sugar production are also examples of the receptiveness of Kenyan farmers.

   It is important to stress that although progressive and larger scale farmers might be the early-adopters, adoption is also characteristic for market dependent farmers, if they have the resources, and can afford the risk.[1)]

3. It is generally held that the easy adoption in Kenya is related to non-farm income (resources and risk) and education (know-how). As other sources of income than farming is widespread, risk taking resources are available as are resources to defend the farmers against unfavorable terms of trade.

---

1. Gerhart (1975) found that the presence of drought resistant crops in the crop mix was negatively related to the adoption of improved maize.

4. The sexual division of labour seems to put some contraints on the diffusion process. The selling/buying of land-decisions are made by the husband, but it is the women, who decide on the crop composition in cases of food crops and it is a more joint decision in case of cash crops.

   This division of labour tends to make the diffusion process two-stepped, because it is the husband, who relates to the outside (extension officers, Farmer Training Centers, credit schemes, Agricultural Shows). (Staudt 1977, Pala 1978). The diffusion process might also come to an end or be rather erratically, namely in the cases, where there is no husband and the woman-farmer is not approached by extension officers.

   This does not mean that women are less innovative and productive than men, but the new ways of doing things do not reach them directly. (see also Leonard (1972) on extension officers).

5. In Kenya there is a well established tradition for self-reliance, self-help groups - Harambee groups. These groups are dominated by women. This means that we might find the oppsite of a diffusion process, namely a demand and participative process.

6. The hybrid maize case showed - and it is also widely known from industry - that it is important to develop new agricultural techniques in close relation with those, who are going to use it. This emphasizes the importance of research and development stations in Kenya, working in close cooperation with farmers (Gerhardt 1975).

7. The receptiveness on part of especially accumulating farmers indicates that the 'presentation approach' to diffusion is a satisfactorily condition for adoption. The 'demonstration approach might useful in case of non-accumulating farmers.
   The 'forced approach' seems not at present relevant due to a) the non-collectivety in the decision making and b) the reliance on incentives and the district-focus approach.

8. Large scale farmers and early adopters are innovators, but not necessary opinion leaders. On the contrary, they might constrain the diffusion process, because the economic and social distance is too big between them and the small-scale farmers.

9. Small-scale farmers cannot afford to take risks as there is no surplus.

This preliminary profile of farmers has to be developed further both by incoorporating more research material and by confronting it with people working dayly with agriculture.

4: LITERATURE

Carlsen, John (1980): Economic and Social Transformation in Rural Kenya. Centre for Development Research. Publications 4, Uppsala.

Central Bureau of Statistics (1981): The Integrated Rural Surveys 1976-79. Basic Report. November.

Gerhart, John (1975): The Diffusion of Hybrid Maize in Western Kenya. CIMMYT International Maize and Wheat Improvement Center, Mexico.

Hansen, Mogens B and Henrik Secher Marcussen (1981): Contract Farming and The Peasantry. Case Studies from Kenya. Research Report No. 18. Roskilde University Centre.

Haugerud, Angelique (1981): Economic Differentiation among Peasant Households: A Comparison of Embu Coffee and Cotton Zones. Working Paper No. 383, IDS, Nairobi.

Leonard, David (1972): The Social Structure of The Agricultural Extension Services in the Western Province of Kenya. Discussion Paper No. 126, IDS, University of Nairobi. (ext. services favor progressive farmers - seniors belong to elite group, Juniors more related farmers).

Pala, Achola (1978): Women's access to land and their Roles in Agriculture and Decision Making on the Farm. Discussion Paper No. 263, IDS, University of Nairobi.

Republic of Kenya (1983): Development Plan 1984-88, Nairobi.

Schluter, Michael (1984): constraints on Kenya's Food and Beverage Exports. Institute of Development Studies. Nairobi.

DEVELOPMENT RESEARCH GROUP

WORKING PAPERS:

No. 1 Olav Jull Sørensen: Marketing Issues in Peasant Agricultural Development, 55pp, 1983

No. 2 Hans Gullestrup: "The Ecol-Humanistic Technology - the new Technology as Experiences from the Past", 33pp, 1983

No. 3 Georg Sørensen: Transnationals and the Transfer of Technology to the Third World, 31pp, 1984.

No. 4 Georg Sørensen: International Bureaucracies and Aid: The Political Economy of the 'B-Share', 11pp, 1984.

No. 5 Georg Sørensen: Notes on Materialism and Boredom - Western Development Ideals, 12pp, 1984.

No. 6 Olav Jull Sørensen: "Marketing Systems and Economic Development. An Institutional-structural Approach, 41pp, 1984.

No. 7 Georg Sørensen: How Much Poison is Another Man's Meat? - Notes on the Logic of World Systems Analysis, 29pp, 1984.

No. 8 Georg Sørensen: Peace and Development: Looking for the right Track, 18pp, 1984.

No. 9 Georg Sørensen: The Twists and Turns of Development Theory - A Comment on "The European Experience" by Dieter Senghaas. 1984.

No. 10 Jacques Hersch & Ellen Brun: Aspects of Soviet participation in a shifting world economy. 1984.

No. 11 Olav Jull Sørensen: Marketing System Development and Labour Migration: Analysis and Consequences. 1984.

No. 12 Georg Sørensen: How Cold is the Second Cold War? - An assessment of the scope of 'the great contest'. 1984.

No. 13 John E. Kuada: Agricultural Development in the Third World. 1984.

No. 14 Olav Jull Sørensen: Profiles of Tanzanian Peasants and their Marketing Implications. 1984.

No. 15 Jørgen Kristiansen: Urban Passenger Transport in Developing Countries - Socio-economic impact and the choice of technology. 1985.

No. 16 John E. Kuada: Marketing Systems in a Development Process. 1985.

No. 17 Georg Sørensen: Some Contradictions in a Rich Concept of Development. 1985.

No. 18 Olav Jull Sørensen: Marketing of Agricultural Inputs/ Implements and Profiles of Farmers in Kenya: Project preparations. 1986.